

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (previously presented) A medical device, comprising:
an elongate shaft including a longitudinally extending proximal section having a distal end, a longitudinally extending distal section having a proximal end, and a connector connecting the proximal section and the distal section of the elongate shaft, wherein the connector is fixedly secured to both the proximal section and the distal section, securing the distal end of the proximal section with the proximal end of the distal section; and
a filter coupled to the shaft.
2. (original) The medical device of claim 1, wherein the proximal section comprises a first material and the distal section comprises a second material that is different from the first material.
3. (original) The medical device of claim 2, wherein the first material comprises stainless steel and the second material includes nickel-titanium alloy.
4. (original) The medical device of claim 2, wherein the connector comprises a third material that is compatible for bonding to both the first and second material.
5. (original) The medical device of claim 2, wherein the connector is welded to both the first material and to the second material.

6. (original) The medical device of claim 2, wherein the first material has a first flexibility and the second material has a second flexibility that is more flexible than the first flexibility.

7. (original) The medical device of claim 6, wherein the connector blends the first flexibility with the second flexibility.

8. (original) The medical device of claim 1, wherein the connector is disposed over the distal end of the proximal section and the proximal end of the distal section.

9. (withdrawn) The medical device of claim 1, further comprising a bismuth alloy connecting material disposed adjacent the connector.

10. (previously presented) An embolic protection filtering device, comprising:

a filter wire including a core member, the core member including a proximal region and a distal region, the proximal region comprising a first material and including a distal end, the distal region comprising a second material different from the first material and including a proximal end;

a connector disposed over the distal end of the proximal region and the proximal end of the distal region, the connector fixedly secured to each of the proximal and distal regions of the core member; and

a filter assembly coupled to the filter wire, the filter assembly including a filter frame and a filter membrane coupled to the filter.

11. (original) The filtering device of claim 10, wherein the first material comprises stainless steel.

12. (original) The filtering device of claim 10, wherein the second material comprises nickel-titanium alloy.

13. (original) The filtering device of claim 10, wherein the connector comprises a third material different from the first material and the second material, the third material being compatible for bonding to both the first and second material.

14. (original) The filtering device of claim 13, wherein the third material comprises a nickel-chromium alloy.

15. (previously presented) The filtering device of claim 10, wherein a reduced cross sectional area is defined adjacent at least one of the distal end of the proximal region and the proximal end of the distal region.

16. (withdrawn) The filtering device of claim 15, wherein the reduced size portion or portions include a taper.

17. (withdrawn) The filtering device of claim 15, wherein both the proximal region and the distal region include a reduced size portion, and wherein the reduced size portion of the proximal region and the reduced size portion of the distal region overlap.

18. (withdrawn) The filtering device of claim 15, wherein both the proximal region and the distal region include a reduced size portion, and wherein the reduced size portion of the proximal region and the reduced size portion of the distal region have interlocking shapes.

19. (previously presented) The filtering device of claim 15, wherein both the proximal region and the distal region include a reduced cross sectional area, and wherein the reduced cross sectional area of the proximal region and the reduced cross sectional area of the distal region are joined together to define a butt joint.

20. (original) The filtering device of claim 10, wherein the device further comprises a covering over a portion of the core member.

21. (original) The filtering device of claim 20, wherein the covering comprises a polymer sheath.

22. (withdrawn) The filtering device of claim 22, wherein the covering comprises a coil.

23. (withdrawn) The filtering device of claim 10, wherein the distal region of the core member include a first section and a second section that are connected by a second connector.

24. (previously presented) An embolic protection filtering device, comprising:

a filter wire including a core member and a covering disposed over at least a portion of the core member, the core member including a proximal portion and a distal portion, the proximal portion having a first flexibility and including a distal end, the distal portion having a second flexibility different from the first flexibility and including a proximal end;

a connector disposed over the distal end of the proximal portion and the proximal end of the distal portion, the connector fixedly secured to each of the proximal and distal portions of the core member; and

a filter assembly coupled to the filter wire, the filter assembly including a filter frame, a filter membrane coupled to the filter frame, and one or more struts extending between the filter frame and the filter wire.

25. (original) The filtering device of claim 24, wherein the proximal portion comprises stainless steel.

26. (original) The filtering device of claim 24, wherein the distal portion comprises nickel-titanium alloy.

27. (original) The filtering device of claim 24, wherein the connector comprises a connector material that is compatible for bonding to both the proximal and distal portions.

28. (original) The filtering device of claim 27, wherein the connector material comprises a nickel-chromium alloy.

29. (previously presented) The filtering device of claim 24, wherein a reduced cross sectional area is defined adjacent at least one of the distal end of the proximal portion and the proximal end of the distal portion.

30. (withdrawn) The filtering device of claim 29, wherein the reduced size region or regions include a taper.

31. (withdrawn) The filtering device of claim 29, wherein both the proximal portion and the distal portion include a reduced size region, and wherein the reduced size region of the proximal portion and the reduced size region of the distal portion overlap.

32. (withdrawn) The filtering device of claim 29, wherein both the proximal portion and the distal portion include a reduced size region, and wherein the reduced size region of the proximal portion and the reduced size region of the distal portion have interlocking shapes.

33. (previously presented) The filtering device of claim 29, wherein both the proximal portion and the distal portion include a reduced cross sectional area, and wherein the reduced cross sectional area of the proximal portion and the reduced cross sectional area of the distal portion are joined together to define a butt joint.

34. (original) The filtering device of claim 24, wherein the covering comprises a polymer sheath.

35. (withdrawn) The filtering device of claim 24, wherein the covering comprises a coil.

36. (withdrawn) The filtering device of claim 24, wherein the distal region of the core member include a first section and a second section that are connected by a second connector.

37. (withdrawn) The filtering device of claim 24, further comprising a bismuth alloy connector material disposed adjacent the distal end of the proximal portion and the proximal end of the distal portion.

38. (original) The filtering device of claim 24, wherein the connector is welded to the proximal portion and to the distal portion.

39. (previously presented) An embolic protection filtering device, comprising:

a filter wire including a core member and a covering disposed over at least a portion of the core member, the core member including a proximal region and a distal region, the proximal region comprising a first material and including a distal end, the distal region comprising a second material different from the first material and including a proximal end;

means for securing the proximal region with the distal region; and

a filter assembly coupled to the filter wire, the filter assembly including a filter frame, a filter membrane coupled to the filter frame, and one or more struts extending between the filter frame and the filter wire.

40. (previously presented) An embolic protection filtering device, comprising:

a filter wire including a core member and a covering disposed over at least a portion of the core member, the core member including a proximal portion and a distal portion, the proximal portion having a first flexibility and including a distal end, the distal

portion comprising a second flexibility different from the first flexibility and including a proximal end;

means for blending the first flexibility with the second flexibility; and

a filter assembly coupled to the filter wire, the filter assembly including a filter frame, a filter membrane coupled to the filter frame, and one or more struts extending between the filter frame and the filter wire.

41-43. (cancelled)

44. (previously presented) A method of using a medical device, comprising:
providing a filtering device, the filtering device including an elongate shaft having a filter coupled thereto, the shaft including a longitudinally extending proximal section having a distal end, a longitudinally extending distal section having a proximal end, and a connector connecting the proximal section and the distal section of the shaft, wherein the connector is fixedly secured to both the proximal section and the distal section, securing the distal end of the proximal section with the proximal end of the distal section;

inserting the filtering device into a blood vessel;

advancing the filtering device through the blood vessel to a location adjacent a target region; and
deploying the filter.

45. (previously presented) The medical device of claim 1, wherein the filter is disposed proximal to the connector.

46. (previously presented) The medical device of claim 1, wherein the filter is disposed distal to the connector.